

Homopolymer Polypropylene

PHF1001



EVALENE[®] PHF1001 is a medium slip, medium antiblock Homopolymer Polypropylene grade for tubular water quench film applications (also referred to as iPP).

EVALENE[®] PHF1001 is designed for iPP in the 15 to 100 microns (0.0006" to 0.004") thickness range. Outstanding clarity and gloss, ease of opening and superior toughness are key properties of **EVALENE[®] PHF1001** films. These films have inherent clarity that translates to stunning packaging for maximum consumer appeal. They likewise have superior toughness that assures packaging integrity and protection.

FEATURES

- Outstanding optical properties
- Excellent openability
- Superior toughness
- Good organoleptic properties
- Meets FDA Philippines food-contact requirements
- Halal certified

TYPICAL APPLICATIONS

- Films from 15 to 100 microns (0.0006" to 0.004") for food and garment packaging

Product Properties

Property	Test Condition	Test Method	Metric Value	Unit
Melt Flow	230°C/2.16 kg	ASTM D1238	10	g/10 min
Tensile Strength at Yield*	500 mm/min	ASTM D882	23 / 21	MPa
Elongation at Yield*	500 mm/min	ASTM D882	8 / 173	%
Tensile Strength at Break*	500 mm/min	ASTM D882	7 / 11	MPa
Elongation at Break*	500 mm/min	ASTM D882	55 / 193	%
Tensile Modulus*	1% Secant, 25 mm/min	ASTM D882	711 / 738	MPa
Elmendorf Tear Strength*		ASTM D1922	33 / 70	g
% Haze*		ASTM D1003	2.8	%
Gloss*	60° angle of incidence	ASTM D2457	130	%
Coefficient of Friction - Static*		ASTM D1894	0.26	-
Coefficient of Friction - Kinetic*		ASTM D1894	0.15	-

*Properties tested on 30µ films.

Tensile and tear properties are in machine and transverse directions (MD / TD).

Properties based on ASTM Type I injection molded samples available upon request.

Typical Processing Conditions

Extrusion Temperatures
Chill Roll/Water Bath

170 - 220°C
23 - 30°C

Overall, **EVALENE® PHF1001** has superior mechanical properties than the other iPP material. It has higher tensile strength at yield and at break in the transverse direction, better elongation at yield and at break in the transverse direction, higher tensile modulus in the transverse direction, and superior tear strength in the machine direction. The combination of outstanding tear strength and tensile strength results in film toughness that **EVALENE® PHF1001** consistently delivers.

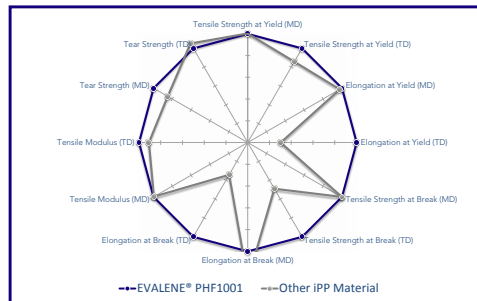


Figure 1. Mechanical property performance of **EVALENE® PHF1001** vs. other iPP material

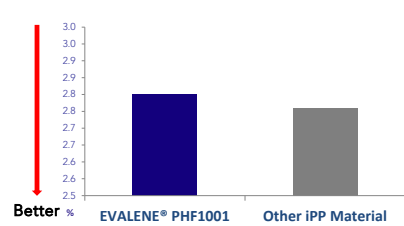


Figure 2. Comparison of haze between **EVALENE® PHF1001** and other iPP material (30 micron film)

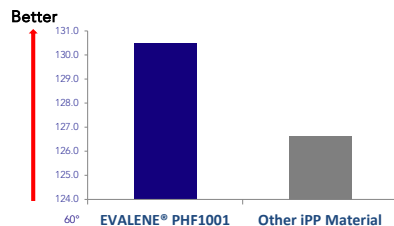


Figure 3. Comparison of gloss between **EVALENE® PHF1001** and other iPP material (30 micron film)

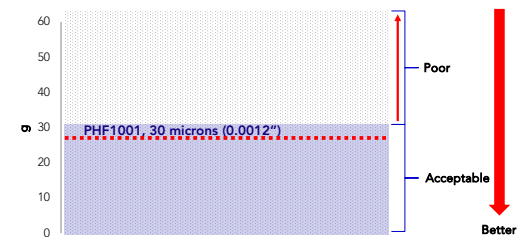


Figure 4. Blocking force of **EVALENE® PHF1001** (30 micron film)

iPP made of **EVALENE® PHF1001** exhibits outstanding clarity that results in transparent films.

EVALENE® PHF1001 has acceptable blocking force that gives good film openability.

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